THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR
PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A file review system for storing and managing a set of comments associated with a source file,
comprising

means for accepting data from the source file and storing a representation of the source file as
a markup file,

means for creating a comment file containing data representing the set of comments associated
with the source file,

means for accepting new comments for inclusion in the set of comments associated with the
source file and for updating the comment file to correspond to the complete set of comments,

means for generating a hypertext document from the markup file and from the comment file, the
hypertext document corresponding to the source file and including portions corresponding to one
or more of the set of comments associated with the source file,

means for communicating the hypertext document to a user for display.

2. The file review system of claim 1 in which the means for accepting data from the source file and
storing the source file as a markup file further comprises means for representing the source file
as a linked list of objects corresponding to a hypertext representation of the source file, wherein
the markup file is a binary file representation of the linked list.

3. The file review system of claim 2 in which the means for representing the source file as a linked
list of objects further comprises means for inserting comment insertion objects into the linked list
of objects and in which the means for generating a hypertext document further comprises means to
include hypertext data in the hypertext document to display one or more symbols representing each
comment insertion object.

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1   4.   The file review system of claim 3 in which the one or more symbols representing each comment

2   insertion object comprise a hypertext link to a hypertext form for user input of a comment.

1   5.   The file review system of claims 3 or 4 in which the means for representing the source file as

2   a linked list of objects further comprises means for inserting comment display objects into the linked

3   list of objects, each comment display object being associated with a comment insertion object and

4   in which the means for generating a hypertext document further comprises means to include

5   hypertext data in the hypertext document to display comments in accordance with the corresponding

6   comment display objects.

1   6.   The file review system of claim 5 in which each one of the comment display objects comprises

2   open tag data representing the open hypertext tags, at the location of the comment display

3   object, in the linked list of objects

4   and in which the means for generating a hypertext document further comprises

5   means to insert closing hypertext data in the hypertext document, prior to a selected one

6   of the comments being displayed in the hypertext document, and means to insert

7   reopening hypertext data in the hypertext document, following the selected one of the

8   comments being displayed in the hypertext document,

9   the closing hypertext data and the reopening hypertext data both being defined by the

10   open tag data for the comment display object associated with the selected one of the

11   comments being displayed.

1   7.   The file review system of claim 2 in which the means for representing the source file as a linked

2   list of objects further comprises a means for normalizing the linked list of objects whereby

3   objects representing text are enclosed by objects representing paragraph tags,

4   end of sentence indicators in objects in the linked list are represented in text,

5   objects representing hypertext end tags are selectively located in the linked list to close all

6   hypertext tags, and

7   objects representing unnecessary hypertext tags are removed from the linked list.

1   8.   The file review system of claim 2 in which the linked list of objects comprises objects

2   appropriately selected from the set of objects comprising simple tag objects, tag objects, end tag

3   objects, text objects, comment insertion objects, comment display objects, complex whitespace

4   objects, spaces objects, newlines objects, hypertext comment objects, ordered list item tag

5   objects, and link tag objects.

1   9.   The file review system of claim 1 in which the means for generating a hypertext document

2   comprises a common gateway interface computer program.

1   10.   The file review system of claim 1 in which the means for generating a hypertext document

2   further comprises means to generate a hypertext document which corresponds to a predefined

3   subsection of the markup file and the associated subsection of the comment file.

1   11.   The file review system of claim 2 in which

2   each object in the linked list of objects has a type, and comprises contents derived from a

3   portion of the source file,

4   each comment insertion object and each comment display object comprises a contents line

5   identifier, representing the line number defining the location of the object in relation to the

6   source file,

7   the comment file consists of comment line identifier data associated with the set of

8   comments representing the line numbers in the source file with which each comment is

9   related,

10   and in which the means for generating a hypertext document further comprises

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11   means to traverse the linked list of objects comprising, and means to select a display

12   object from the linked list of objects,

13   means to determine the type of the display object,

14   means to generate hypertext data to correspond to the type of the display object and the

15   contents of the display object,

16   means to identify the contents line identifier for the display object and for selecting

17   comment display data from the comment file based on the contents line identifier and the

18   comment line identifiers of the comment file,

19   means to generate hypertext data from the comment file representing the selected one of

20   the set of comments corresponding to the comment line identifier associated with the

21   contents line identifier.

1   12.   The file review system of claim 1 in which each comment in the set of comments has

2   associated with it a severity and in which the comment file consists of data representing the severity

3   of each comment, and in which the means for accepting new comments for inclusion in the set of

4   comments associated with the source file and for updating the comment file to correspond to the

5   complete set of comments, comprises means for accepting data representing the severity of the new

6   comments, and means for updating the comment file to add data representing the severity of the new

7   comments.

1   13.   The file review system of claim 2, in which the means for generating a hypertext document

2   comprises means for selectively excluding portions of the comment file corresponding to one or

3   more comments in the set of comments, whereby a selectively defined subset of the set of comments

4   is represented in the hypertext document.

1   14.   The file review system of claim 13, in which comments comprise comment attributes, the

2   means for selectively excluding portions of the comment file further comprising means for

3 selectively defining the subset of the set of comments by selection based on comment attributes.

1 15. The file review system of claim 14 in which the comment attributes comprise one or more of

2 comment type, comment severity, comment date, comment status, comment author, and comment

3 content.

1 16. The file review system of claim 1 in which system users are uniquely identified in the system

2 and in which the means for accepting new comments further comprises means for selectively

3 restricting the inclusion of new comments in the set of comments based on the unique identity of

4 system users.

1 17. The file review system of claim 1 in which the source file is associated with a defined cutoff

2 date and in which the means for accepting new comments further comprises means for selectively

3 restricting the inclusion of new comments on dates past the defined cutoff date.

1 18. The file review system of claim 1 further comprising means to navigate the comment file to

2 provide user access to comments in user-defined sequenced order.

1 19. The file review system of claim 1 further comprising means to collect and display statistics

2 relating to the set of comments.

1 20. The file review system of claim 19 in which the means to collect and display statistics further

2 comprises means for displaying hypertext links in the statistics display whereby a user may access

3 a selected subset of the set of comments by means of the hypertext link.

1 21. A web-based file review system for storing and managing comments from a plurality of

2 reviewers, the comments being associated with one or more webs of source files, comprising

3   a parser to parse a selected one of the set of source files into a linked list of objects

4   corresponding to a hypertext representation of the selected source file, the linked list further

5   comprising comment insertion objects and comment display objects, the parser writing the

6   linked list of objects to a binary markup file representing the linked list of objects and

7   corresponding to the selected one of the set of source files, each comment display object

8   being capable of being associated with one or more comments,

9   a set of comment files, each comment file being associated with a one of the set of source

10   files and comprising data representing comments associated with the one of the set of source

11   files,

12   common gateway interface program code means for accepting new comments for inclusion

13   in the set of comments associated with a reviewer-defined source file and for updating the

14   associated comment file,

15   common gateway interface program code means for generating a hypertext document from

16   a markup file corresponding to reviewer-selected source file and from the associated

17   comment file, the hypertext document corresponding to the reviewer-selected source file and

18   the hypertext document including portions corresponding to one or more of the set of

19   comments associated with the reviewer-selected source file, the hypertext data for each

20   portion relating to a comment to be displayed being defined by the associated comment

21   display object,

22   the hypertext document selectively including hypertext links representing comment

23   insertion objects, the hypertext links providing reviewers with forms for reviewer entry

24   of comments,

25   the hypertext document selectively including hypertext data for calling the common

26   gateway interface program for generating a hypertext document and the hypertext

27   document selectively including hypertext data for calling the common gateway interface

28   program for accepting new comments,

29   means for communicating the hypertext document to a browser for display.

1   22.   The system of claim 21, in which each one of the comment display objects comprises

2   open tag data representing the open hypertext tags, at the location of the comment display

3   object, in the linked list of objects,

     and in which the common gateway interface program code means for generating a hypertext

     document further comprises

6   means to insert closing hypertext data in the hypertext document, prior to a selected one

7   of the comments being displayed in the hypertext document, and means to insert

8   reopening hypertext data in the hypertext document, following the selected one of the

9   comments being displayed in the hypertext document,

10   the closing hypertext data and the reopening hypertext data both being defined by the

11   open tag data for the comment display object associated with the selected one of the

12   comments being displayed.

1   23.   The system of claim 21 in which the linked list of objects comprises objects appropriately

2   selected from the set of objects comprising simple tag objects, tag objects, end tag objects, text

3   objects, comment insertion objects, comment display objects, complex whitespace objects, spaces

4   objects, newlines objects, hypertext comment objects, ordered list item tag objects, and link tag

5   objects.

1   24.   The system of claim 21 in which

2   each object in the linked list of objects has a type, and comprises contents derived from a

3   portion of the source file,

4   each comment insertion object and each comment display object comprises a contents line

5   identifier, representing the line number defining the location of the object in relation to the

6   source file,

7   the comment file consists of comment line identifier data associated with the set of

8   comments representing the line numbers in the source file with which each comment is

9   related,

10   and in which the common gateway interface program code means for generating a hypertext

11   document further comprises

12   means to traverse the linked list of objects, and means to select a display object from the

13   linked list of objects,

14   means to determine the type of the display object,

15   means to generate hypertext data to correspond to the type of the display object and the

16   contents of the display object,

17   means to identify the contents line identifier for the display object and for selecting

18   comment display data from the comment file based on the contents line identifier and the

19   comment line identifiers of the comment file, and

20   means to generate hypertext data from the comment file representing the selected one of

21   the set of comments corresponding to the comment line identifier associated with the

22   contents line identifier.

1 25.   An article of manufacture comprising:

2   a computer usable medium having computer readable program code means embodied therein for

3   causing the storage and management of comments in a web-based file review system, the

4   comments being from a plurality of reviewers, and being associated with one or more webs of

5   source files, the computer readable program code means in the article of manufacture comprising

6   computer readable program code means for causing a computer to parse a selected one of the

7   set of source files into a linked list of objects corresponding to a hypertext representation of

8   the selected source file, the linked list further comprising comment insertion objects and

9   comment display objects, the parser writing the linked list of objects to a binary markup file

10   representing the linked list of objects and corresponding to the selected one of the set of

11   source files, each comment display object being capable of being associated with one or

12   more comments,

13   computer readable program code means for causing the computer to create and manage a set

14   of comment files, each comment file being associated with a one of the set of source files and

15   comprising data representing comments associated with the one of the set of source files,

16   computer readable program code means for causing the computer to accept new comments

17   for inclusion in the set of comments associated with a reviewer-defined source file and to

18   update the associated comment file,

19 computer readable program code means for causing the computer to generate a hypertext

20 document from a markup file corresponding to reviewer-selected source file and from the

21 associated comment file, the hypertext document corresponding to the reviewer-selected

22 source file and

23 the hypertext document including portions corresponding to one or more of the set of

24 comments associated with the reviewer-selected source file, the hypertext data for each

25 portion relating to a comment to be displayed being defined by the associated comment

26 display object,

27 the hypertext document selectively including hypertext links representing comment

28 insertion objects, the hypertext links providing reviewers with forms for reviewer entry

29 of comments,

30 the hypertext document selectively including hypertext data for calling the common

31 gateway interface program for generating a hypertext document and the hypertext

32 document selectively including hypertext data for calling the common gateway interface

33 program for accepting new comments,

34 computer readable program code means for causing the computer to communicate the

35 hypertext document to a browser for display.

26. The article of manufacture of claim 25, in which each one of the comment display objects comprises

open tag data representing the open hypertext tags, at the location of the comment display

4 object, in the linked list of objects.

5   and in which the computer readable program code means for causing the computer to

6   generate a hypertext document further comprises

7   means to insert closing hypertext data in the hypertext document, prior to a selected one

8   of the comments being displayed in the hypertext document, and means to insert

9   reopening hypertext data in the hypertext document, following the selected one of the

10   comments being displayed in the hypertext document,

11   the closing hypertext data and the reopening hypertext data both being defined by the

12   open tag data for the comment display object associated with the selected one of the

13   comments being displayed.

27.   The article of manufacture of claim 25 in which the linked list of objects comprises objects

2   appropriately selected from the set of objects comprising simple tag objects, tag objects, end tag

3   objects, text objects, comment insertion objects, comment display objects, complex whitespace

4   objects, spaces objects, newlines objects, hypertext comment objects, ordered list item tag objects,

5   and link tag objects.

28.   The article of manufacture of claim 25 in which

2   each object in the linked list of objects has a type, and comprises contents derived from a

3   portion of the source file,

4   each comment insertion object and each comment display object comprises a contents line

5   identifier, representing the line number defining the location of the object in relation to the

6   source file,

7   the comment file consists of comment line identifier data associated with the set of

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8   comments representing the line numbers in the source file with which each comment is

9   related,

10   and in which the computer readable program code means for causing the computer to

11   generate a hypertext document further comprises

12   means to traverse the linked list of objects, and means to select a display object from the

13   linked list of objects,

14   means to determine the type of the display object,

15   means to generate hypertext data to correspond to the type of the display object and the

16   contents of the display object,

17   means to identify the contents line identifier for the display object and for selecting

18   comment display data from the comment file based on the contents line identifier and the

19   comment line identifiers of the comment file, and

20   means to generate hypertext data from the comment file representing the selected one of

21   the set of comments corresponding to the comment line identifier associated with the

22   contents line identifier.

1   29.   A computer program product for use with a hypertext server, the computer program product

2   comprising:

3   a computer usable medium having computer readable program code means embodied in the

4   medium for causing the storage and management of comments in a web-based file review

5   system, the comments being from a plurality of reviewers, and being associated with one or more

6   webs of source files, the computer program product having:

7   computer readable program code means for causing a computer to parse a selected one of the

8   set of source files into a linked list of objects corresponding to a hypertext representation of

9   the selected source file, the linked list further comprising comment insertion objects and

10   comment display objects, the parser writing the linked list of objects to a binary markup file

11   representing the linked list of objects and corresponding to the selected one of the set of

12   source files, each comment display object being capable of being associated with one or

13   more comments,

14   computer readable program code means for causing the computer to create and manage a set

15   of comment files, each comment file being associated with a one of the set of source files and

16   comprising data representing comments associated with the one of the set of source files,

17   computer readable program code means for causing the computer to accept new comments

18   for inclusion in the set of comments associated with a reviewer-defined source file and to

19   update the associated comment file,

20   computer readable program code means for causing the computer to generate a hypertext

21   document from a markup file corresponding to reviewer-selected source file and from the

22   associated comment file, the hypertext document corresponding to the reviewer-selected

23   source file and

24   the hypertext document including portions corresponding to one or more of the set of

25   comments associated with the reviewer-selected source file, the hypertext data for each

26   portion relating to a comment to be displayed being defined by the associated comment

27   display object,

28   the hypertext document selectively including hypertext links representing comment

29   insertion objects, the hypertext links providing reviewers with forms for reviewer entry

30   of comments,

31   the hypertext document selectively including hypertext data for calling the common

32   gateway interface program for generating a hypertext document and the hypertext

33   document selectively including hypertext data for calling the common gateway interface

34   program for accepting new comments,

35   computer readable program code means for causing the computer to communicate the

36   hypertext document to a browser for display.

1   30.   The computer program product of claim 29, in which each one of the comment display objects

2   comprises

3   open tag data representing the open hypertext tags, at the location of the comment display

4   object, in the linked list of objects,

5   and in which the computer readable program code means for causing the computer to

6   generate a hypertext document further comprises

7   means to insert closing hypertext data in the hypertext document, prior to a selected one

8   of the comments being displayed in the hypertext document, and means to insert

9   reopening hypertext data in the hypertext document, following the selected one of the

10   comments being displayed in the hypertext document,

11   the closing hypertext data and the reopening hypertext data both being defined by the

12   open tag data for the comment display object associated with the selected one of the

13   comments being displayed.

1   31.   The computer program product of claim 29 in which the linked list of objects comprises

2   objects appropriately selected from the set of objects comprising simple tag objects, tag objects, end

3   tag objects, text objects, comment insertion objects, comment display objects, complex whitespace

4   objects, spaces objects, newlines objects, hypertext comment objects, ordered list item tag objects,

5   and link tag objects.

    32.   The computer program product of claim 29 in which

        each object in the linked list of objects has a type, and comprises contents derived from a

        portion of the source file,

4   each comment insertion object and each comment display object comprises a contents line

5   identifier, representing the line number defining the location of the object in relation to the

6   source file,

7   the comment file consists of comment line identifier data associated with the set of

8   comments representing the line numbers in the source file with which each comment is

9   related,

10   and in which the computer readable program code means for causing the computer to

11   generate a hypertext document further comprises

12   means to traverse the linked list of objects, and means to select a display object from the

13   linked list of objects,

14   means to determine the type of the display object,

15   means to generate hypertext data to correspond to the type of the display object and the

16   contents of the display object,

17   means to identify the contents line identifier for the display object and for selecting

18   comment display data from the comment file based on the contents line identifier and the

19   comment line identifiers of the comment file, and

20   means to generate hypertext data from the comment file representing the selected one of

21   the set of comments corresponding to the comment line identifier associated with the

22   contents line identifier.

1   33.   A method of storing and managing a set of comments associated with a source file, in a file

2   review system, the method comprising the steps of

3   accepting data from the source file and storing a representation of the source file as a markup

4   file,

5   creating a comment file containing data representing the set of comments associated with the

6   source file,

7   responding to user input to accept new comments for inclusion in the set of comments associated

8   with the source file and updating the comment file to correspond to the complete set of

9   comments,

10   responding to user input to dynamically generate a hypertext document from the markup file and

11   from the comment file, the hypertext document corresponding to the source file and including

12   portions corresponding to one or more of the set of comments associated with the source file,

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13   communicating the hypertext document to a user for display.

1   34.   The method of claim 33 in which the step of accepting data from the source file and storing

2   the source file as a markup file comprises the step of representing the source file as a linked list of

3   objects corresponding to a hypertext representation of the source file, wherein the markup file is a

4   binary file representation of the linked list.

1   35.   The method of claim 34 in which the step of representing the source file as a linked list of

2   objects further comprises the step of inserting comment insertion objects into the linked list of

3   objects and in which step of generating a hypertext document further comprises the step of including

4   hypertext data in the hypertext document to display one or more symbols representing each comment

5   insertion object.

1   36.   The method of claim 35 in which the step of including hypertext data in the hypertext

2   document to display one or more symbols representing each comment insertion object further

3   comprises the step of including a hypertext link to a hypertext form for user input.

1   37.   The method of claims 35 or 36 in step of representing the source file as a linked list of objects

2   further comprises the step of inserting comment display objects into the linked list of objects, each

3   comment display object being associated with a comment insertion object and in which the step of

4   generating a hypertext document further comprises the step of including hypertext data in the

5   hypertext document to display comments in accordance with the corresponding comment display

6   objects.

1   38.   The method of claim 37 in which each one of the comment display objects comprises

2   open tag data representing the open hypertext tags, at the location of the comment display

3   object, in the linked list of objects

4   and in which the step of generating a hypertext document further comprises the steps of

5   inserting closing hypertext data in the hypertext document, prior to a selected one of the

6   comments being displayed in the document, and inserting reopening hypertext data in the

7   hypertext document, following the selected one of the comments being displayed in the

8   hypertext document,

9   the closing hypertext data and the reopening hypertext data both being defined by the

10   open tag data for the comment display object associated with the selected one of the

11   comments being displayed.

1   39.   A method for storing and managing comments in a web-based file review system, the

2   comments being from a plurality of reviewers and being associated with one or more webs of source

3   files, comprising the steps of

4   parsing a selected one of the set of source files into a linked list of objects corresponding to

5   a hypertext representation of the selected source file, the linked list further comprising

6   comment insertion objects and comment display objects, the parser writing the linked list of

7   objects to a binary markup file representing the linked list of objects and corresponding to

8   the selected one of the set of source files, each comment display object being capable of

9   being associated with one or more comments,

10   on review request, accepting new comments for inclusion in the set of comments associated

11   with a reviewer-defined source file and for updating an associated comment file, the

12   comment file being associated with a one of the set of source files and comprising data

13   representing comments associated with the one of the set of source file,

14   dynamically generating a hypertext document from a markup file corresponding to reviewer-

15   selected source file and from the associated comment file, the hypertext document

16   corresponding to the reviewer-selected source file and

17   the hypertext document including portions corresponding to one or more of the set of

18   comments associated with the reviewer-selected source file, the hypertext data for each

19   portion relating to a comment to be displayed being defined by the associated comment

20   display object,

21   the hypertext document selectively including hypertext links representing comment

22   insertion objects, the hypertext links providing reviewers with forms for reviewer entry

23   of comments,

24   the hypertext document selectively including hypertext data for calling the common

25   gateway interface program for generating a hypertext document and the hypertext

26   document selectively including hypertext data for calling the common gateway interface

27   program for accepting new comments,

28   communicating the hypertext document to a browser for display.

1   40.   A program storage device readable by a machine, tangibly embodying a program of

2   instructions executable by the machine to perform method steps for storing and managing comments

3   in a web-based file review system, the method steps comprising the steps of claims 33, 34, 35, 36,

4   37, or 38.

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41.   A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for storing and managing comments in a web-based file review system, the method steps comprising the steps of claim 39.